boards should provide physicians with blanks for reporting cases, upon which they should signify whether the health authorities are to visit the patient and instruct him or whether they would attend to it themselves. In this way there would not be anything of a meddlesome nature in notification.

To carry out this work as it should be several assistants would be required, whose duty it would be to visit the tuberculous and give them instructions in hygiene, disinfection and general measures of prevention. In no way could this be accomplished better than by a municipal tuberculosis dispensary. The number of tuberculous patients who report to the physicians is a very small proportion of the number ill; but if the municipality would establish a free dispensary, where the poor could report for instruction and help, and have connected with it a corps of trained nurses who would instruct the afflicted and visit their homes and help to make them hygienic, it would rid the tenements of many sources of infection. Such a dispensary should also provide spitcups and disinfectants; and it would be an act of mercy if such foods as milk and eggs could be given to those who were in need of them.

Such a dispensary would be visited by many who could be restored to a degree of health, where they would be capable of self-support for years, and many who would fully regain health if they could but have an opportunity, and by many whose chances of life are few, but who would scatter infection if allowed to remain in their miserable quarters. For the former there should be sanatoria, where skilled treatment would restore them to their wage-earning power; for the latter, hospitals where they could spend their last days under hygienic surroundings. The expense thrown upon the municipality and state for the care of those who become their wards through the effects of this disease would doubtless go far toward maintaining such institutions.

Another manner in which the general medical man may render efficient service in the prevention of the spread of consumption is by acquainting himself with the early signs of tuberculosis, and learning to make an early diagnosis. It is conservative to say that if the disease were diagnosed as it can be in its very incipiency, at least 75 per cent could be restored to health by intelligent treatment. Think of what this means from the standpoint of prevention! Seventy-five per cent of the sources of infection could be eliminated by early diagnosis and treatment!

It is a sad fact that patients do not present themselves for examination at this favorable time as often as they should; but let us be sure that we recognize the disease when they do come. Family physicians should always bear this disease in mind, and then if any member of the families in which they are called shows suspicious symptoms, it would be a kindness to carefully examine them.

In this short discussion of one of the most serious problems before the medical world I have endeavored to point out the part to be played by the general practitioner. From our discussion it can readily be seen that if the disease is to be checked, it must be done largely through his efforts. From his superior knowledge of matters sanitary, and from his superior opportunity, owing to his close relationship with the family, he should, and he must, take the lead in this great work. He must be a strong educational force. It is his opportunity to inculcate into the minds of his friends and families the correct ideas of the disease and its prevention. It is his to insist upon the well remaining so, and upon those ill of the disease taking precautions to prevent infecting others. It is his to teach the people the necessity of an early diagnosis, and it is his to be able to make it. It is his to form public opinion upon this great question, and urge upon the administrative authorities those measures which are necessary to check the spread of the disease.

In the name of humanity, for which our noble profession was called into existence, let medical men take up this neglected cause. I am not an alarmist. I do not believe that this great state is in danger of becoming overrun with consumptives. I have too much faith in the common sense of the medical profession and the people as a whole to entertain such an opinion. The cause of tuberculosis is known. The methods of prevention are understood, and wherever put into operation have proved effective. The death rate from the disease is on the decline, and if we will but act as well as we know, many of us may live to see the "great white plague" shorn of its power.

OBSERVATIONS UPON SANATORIA FOR PULMONARY TUBERCULOSIS.*

By JOHN C. KING, M. D., Banning.

I HAVE no intent to decry the institutions referred to in my title. Properly located, equipped, conducted and restricted they merit professional support. It is well, however, to emphasize the fact that the evolution of the sanatorium, from the merely experimental to the ideal, is not yet complete. Future experience, even more than past achievement, must determine the relative value of sanatorium methods and the class of patients best adapted to them, together with many other important problems.

Like other useful innovations, sanatoria have become a "fad." Indiscriminate praise has generated an enthusiasm that reminds one of the optimistic reception accorded by our profession to former new procedures and remedies. Numerous medical men, unhampered by special training, are establishing institutions everywhere, and are appealing to their brethren for patients to fill them. The apotheosis of the sanitorium has also been taken advantage of by gentlemen whose commercial instincts are keen but who are deficient in ethical culture. One has a health camp on the desert, another an elegantly equipped building in the city. These appeal to the laity direct, through all the well-known advertising channels. More than twenty years ago I was obliged to relinquish my practice in the East on account of tuberculosis of both lungs. Ever since then I have especially studied medical tuberculosis. Twenty years ago the accommodations for tubercular invalids were almost *nil* in Southern California. For instance, at that time no room with fire or in any way heated was provided by any Los Angeles hotel. I am confident that a larger percentage of tuberculosis was cured then than now. It is, of course, impossible to prove such an assertion; nevertheless, I am sure results were better under primitive conditions. As the open air or tent was superseded by the cloth-lined "shack"; it, in turn, by the comfortable, plastered house, and it, finally, by the luxurious building with uniform heat and indoor toilet; as these changes took place the net results became poorer. I find myself in practice reverting more and more to the primitive tent life—becoming more and more afraid of the new building advertised as possessing "all modern improvements."

Our southern country is large and many-featured. Much acrimonious debate has arisen between localities as to which of them is best adapted to the needs of invalids. I am frequently asked, "Where is the best climate for consumptives?" I always reply, "There isn't any." There is always a best place for each individual, but never a "best place" for all. Of patients sent to me, I am obliged to send at least twenty-five per cent to some other resort. The great art is to select a location adapted to each particular

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patient. It is more of an art than a science. Long experience enables one to form a fairly accurate judgment as to whether a given patient will do better at a mountain altitude or below sea level on the desert; at the humid sea coast or in the arid interior. The different effects of the same climatic conditions upon two patients having the same disease, so far as the microscope can determine, is a fact. One may be favorably influenced thereby, the other made worse. A study of the physiological effects upon the healthy human being of varied temperature, humidity, altitude, etc., convinces one that each of these climatic elements has a therapeutic range of its own. No matter where a sanatorium for consumptives is located—in Northern New York or in Southern California—the climate will suit a certain number. The point is to select for each patient, not a given sanatorium, but the climate best suited to him in particular.

In this discussion the doctor becomes the all-important problem. Once in a society meeting I referred to the office of a prominent oculist. I spoke of its elaborate equipment with scientific apparatus, of its perfect adaptation to its purpose. I suggested that if its owner would transfer to me his office and his practice for three months I could make some money, and, incidentally, I could ruin more eyes than he could repair in a lifetime. The illustration is pertinent. A sanatorium is merely an instrument. Its value depends upon the doctor back of it. It is not a fetich to conjure with. No matter how elegantly furnished, how elaborately provided with sun baths and X-ray plants, with good climate and pneumatic cabinets, the cures depend upon the intelligence that utilizes these things. No matter how valuable they may be, they are merely accessories. Detweiler in the Black Forest, Trudeau at Saranac Lake, Von Ruck in Asheville—can one imagine surroundings more different! Yet each has succeeded. It is the man that counts, not the building, nor yet the climate. Let us send our patients to a man, not necessarily to a sanatorium.

So-called sanatorium treatment can be conducted outside as well as inside a sanatorium. In both cases the same drugs may be administered in the same manner. When necessary nurses of equal intelligence and training may guide, control or minister to the patient. The same daily supervision may be exercised by the attending physician. The same hygienic and dietetic regulations may be enforced. While it is true that certain patients enter into the spirit of sanatorium government, and are benefited thereby, it is also true that others are depressed by it, and react badly toward it. Some persons enjoy institutional methods, and are pleased to associate with other invalids. Others again do better segregated from sufferers like themselves, object to community rules and require regulations made personal to themselves. We ought not to assume that all should be sent to a sanatorium, or that none should be sent there. I plead for individualism. Send each where he will probably do best. Here, again, the art of medicine must be practiced rather than its science. It is impossible for the average pulmonary patient to remain many months in an expensive sanatorium; aside from financial considerations, patients chafe against inactivity. No matter what varied entertainment is provided, the ennui finally becomes intolerable. The hope is often proffered that a few months of sanatorium treatment will effect a cure. That hope is usually a cruel delusion.

There are two classes of patients. First, those in the so-called pretubercular stage. Their general health has become so undermined that they are in what may be termed a superlatively receptive condition, but no tubercle baccili are present, nor have any classical symptoms of pulmonary tuberculosis developed. A few months' residence in a sanatorium, or, and equally, a few months spent in quiet country retirement, under skilled medical direction, will restore them to health. These, however, are but a small proportion of those who come to our Southern California resorts. We meet only too few of them. The second class includes all who suffer from actually developed tuberculosis. With them the fight is not a question of months, but of years. The three-year relapse limit ordinarily applied to cancer is none too short for application to these patients. I have repeatedly seen the baccili disappear from the sputum, temperature fall to normal, normal weight and strength return, and yet, after many months or a few years of excellent health, I have seen these patients succumb to the disease. Annually for some years I have had my share of advanced cases formerly pronounced cured at some sanatorium. Indeed, I am disposed to consider the twelve to twenty months following apparent cure as a very critical period in the history of the disease. A period during which the patient should remain under skilled medical supervision, and, if possible, in the climate and amid the surroundings in which improvement took place. I have frequently urged patients who were doing well to purchase a plot of ground and erect upon it a small cottage suited to their requirements. I have bestowed daily attention upon the minutest details of their lives for months after mere symptomatic recovery. As they became better I have induced them to cultivate their gardens, to become interested in live stock, in flowers, in chickens, in anything to prevent ennui and make life worth the living. After an additional year or two most of them were permanently cured. In fact, applying the three-year limit, these people show vastly better results than those pronounced cured and dismissed from professional care as soon as baccili have disappeared and temperature has become normal. Many of these patients have returned to business in Eastern States, and have remained well for periods varying from three to fifteen years. Others can never leave the climate and surroundings in which they have recovered. For instance, the wife of a prominent official of the Pullman Company has been under my care about fifteen years. Baccili disappeared from her sputum, she became the picture of health, absolutely no symptoms remained. And yet every time she has ventured to visit Chicago she has, within four weeks, developed fever, cough and hemorrhage. The point of this argument is the limitation of the sanatorium—in that it must, of necessity, lose the patient at a most critical time, that is, the time of apparent recovery.

There is one class of people—the poor—to whom the sanatorium is absolutely essential. Every practical medical man is familiar with the truth of this statement. Its truth does not depend upon the supposed fact that the sanatorium life is the best for those who have pulmonary tuberculosis, but upon the real fact that no other hygienic life is possible for the poor. From every standpoint, philanthropic, moral, financial, adequate provision should be made for them by the municipality or the state. "Adequate provision" implies sufficient accommodation to prevent those in process of cure from being forced out by new arrivals. Such institutions can only result from an aggressive campaign of education among the people. Meanwhile we cannot accord too much encouragement and praise to such efforts as the Barlow Sanatorium of Los Angeles and the health camp under the care of the Redlands physicians.

TUBERCULOUS PERICARDITIS.

Dr. George William Norris, in the *University of Pennsylvania Medical Bulletin*, gives the result of his studies on this subject, and reports its occurrence in 82 cadavers, out of 7,219 which have been autopsied in the Philadelphia hospitals.